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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,530	07/29/2003	Ralf Naumann	P7111.4US	1529

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EXAMINER	
LOPEZ, FRANK D	

ART UNIT	PAPER NUMBER
3745	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/604,530	NAUMANN ET AL.	
	Examiner	Art Unit	
	F. Daniel Lopez	3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *03 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1,3-7 and 9-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1,3-7 and 9-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/12/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 3, 2006 has been entered.

Response to Amendment

Applicant's arguments filed March 3, 2006, have been fully considered but they are not deemed to be persuasive.

Applicant's arguments with respect to claims 1, 3-7 and 9-16 have been considered but are deemed to be moot in view of the new grounds of rejection.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

Claims 1, 3-5, and 11-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Japan 9-209,723. Japan 9-209,723 discloses an oscillating motor (fig 5) comprising a rotor (117) with rotor vanes (117a) rotatable relative to a stator (119) with stator vanes; wherein the rotor vanes include a widened section tapered radially inwardly from an end face to recesses between the widened section and a constant width section. The recess of claim 11 is shown by a shaded portion at the end of the bottom passage (128).

Claim Rejections - 35 USC § 103

Claims 1, 4-7, 9-12, 15 and 16 are rejected under 35 U.S.C. § 103 as being unpatentable over Peo et al in view of Folland et al. Peo et al discloses an oscillating fluid motor comprising a rotor (17) with rotor vanes (18) rotatable relative to a stator (10)

with stator vanes (16); wherein the rotor vanes include a widened section tapered radially inwardly from an end face to recesses between the widened section and a constant width section (short section adjacent the rotor hub 17); but does not disclose that the stator vanes diverge radially inwardly and match a shape of the sidewalls of the rotor vanes; that the stator vanes have a first recess proximal to the end face; or that lateral surfaces of the widened section pass arc-shaped into lateral surfaces of the radially inwardly positioned section.

Folland et al teaches, for an oscillating fluid motor comprising a rotor with rotor vanes (34) rotatable relative to a stator (20) with stator vanes (radially inwardly tapering side walls); wherein the rotor vanes include a widened section tapered (at 50) radially inwardly from an end face to recesses (formed adjacent 34F); that the stator vanes diverge radially inwardly and match a shape of the sidewalls of the rotor vanes.

One having ordinary skill in the oscillating fluid motor art would understand that the space between the rotor and the stator, when the rotor and stator are in a position where they are as close as they can be, is a dead space. This dead space must be pressurized before the rotor moves and therefore the larger the dead space the slower the reaction of the rotor to pressure. Also, since the dead space does not contribute to the movement of the rotor, the larger the dead space the larger the energy loss due to the dead space.

Since Peo et al and Folland et al are both from the same field of endeavor, the purpose of the reaching of Folland et al would have been recognized in the pertinent art of Peo et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to form the stator vanes of Peo et al such that they diverge radially inwardly and match a shape of the sidewalls of the rotor vanes, as taught by Folland et al, for the purpose of decreasing energy loss and decreasing time for the rotor to react to pressure increases. Since the side walls of the stator vanes match the shape of the sidewalls of the rotor vanes, the stator vanes have a first recess proximal to the end face.

There are many ways to make the rotor of Peo et al. One way is to machine it with a rounded cutter. If it is machined with a rounded cutter, the discontinuity between the widened section and the radially inwardly positioned section will have an arc. There appears to be no reason to make the discontinuity arc-shaped for reasons related to the

fluid flow. Although discontinuities are usually made arc-shaped for decreasing stress concentrations, this area of the rotor does not appear to have large stress concentrations, therefore stress concentrations do not appear to be the reason for the arc-shape.

Therefore, it would have been obvious at the time the invention was made to one having ordinary skill in the art to make the rotor of Peo et al with a rounded cutter, thereby making the discontinuity arc-shap3ed (I.e. the lateral surfaces of the widened section pass arc-shaped into lateral surfaces of the radially inwardly positioned section) as a matter of engineering expediency.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:15 AM -3:45 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

F. Daniel Lopez
Primary Examiner
Art Unit 3745
May 22, 2006